

Work Order ID 61187

August 11, 2010 7:43:15 AM



Page 1

Item ID: D350-636-012

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube RH

Start Date: 8/11/10 Start Qty: 1.00



Cust Item ID:

Required Date: 8/20/10 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: CZ Date: 10/8/11 Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D2750	Rev F
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100

0.00



DC

DOCUMENT CONTROL

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-012 CHG 005

8/10/10/07

Refer BG 129-03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Page 2

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Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.

4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting

5- Drill fwd step holes using DT9616. Ensure proper positioning.

6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B)
ONLY DRILL ONE SIDE OF FWD SADDLE HOLES USING DT81507- Clecko DT8863B on second side of tube and drill pilot holes for detail B.
SECOND SIDE

8- Clecko DT9642 and drill fwd saddle holes on second side, ensure proper positioning.

9- Open up holes for Detail B to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail C to 0.500" (8 holes per side)

10- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to

AWM 10-08-14

DP 10-8-14

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Page 3

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Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

0.297".

11-Open up holes of Detail A to 0.297" (total of 2 holes per side)

12-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004

A/R Aluminum Rod batch: ☐ M114877

13-Grind welds flush as per Dwg D2750

120



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00



Cust Item ID:

Customer:



DP 10-8-16

DP 10-8-17

S 10/08/17

S 10/08/17

70

W/O:		WORK ORDER CHANGES					
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Page 4

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID


Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00

 10-8-17

HandFinish

Memo

0.00

Hand Finishing

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

BE 10-8-17

Quality Control

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Page 5

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160



Skidtubes

Skidtubes

0.00

0.00

Memo

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R ☐ Sikaflex-291 batch: M115114
exp. date: 11-1-30

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9)

A/R ☐ Aluminum Rod batch: M114877

9- At section AP-AP drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D2750

11-Spot face ground handling holes section (total of 4 places per side) as per

BE108-18

BE108-24

DP
10-8-17

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Page 6

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



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dwg D2750

12-Deburr holes

BE 10-B-24

170

QC10- Inspect visual per QSI004- ground welds

0.00

8.10.10.24



QC

Memo

0.00

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

8.10.10.24



QC

Memo

0.00

Quality Control

④

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August 11, 2010 7:43:16 AM



Page 7

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

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--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

190

Pressure Wash per QSI005 4.3

0.00

=) M 10/08/25



HandFinish

Memo

0.00

Hand Finishing

✓ Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

1 / 0

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

M115291

Memo

0.00

Powder Coating

START TIME: 1:15pm
OVEN TEMPERATURE: 320°F
FINISH TIME: 1:45pm

=) M 10/08/25

1 / 0

210

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

Inspect for foreign object per QSI 024

M 10 09 01 ①

W/O:		WORK ORDER CHANGES					
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Page 8

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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220



HandFinish

HandFinishing

0.00

=> M 10109101

x1

Ø

Memo

0.00

Hand Finishing

Install inserts as per dwg D2750

230



HandFinish

HandFinishing

0.00

0.00

=> M 10109103

x1

Ø

Memo

1-Inspect for Foreign Objects

2-Spray inside of tube with "LPS-3"

batch: N/A

3-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750

SIKA FLEX 241

BATCH: 1115114

EXP DATE: 11101

4-assemble o-ring to plug as per dwg D3492 and apply o-ring lube

A/R 55-o-ring lube batch: 1114189

5-Coat all exposed fasteners with "LPS Procyon"

batch: 1114596

Work Order ID 61187

August 11, 2010 7:43:16 AM



Page 9

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									
250	Pick Kit	0.00							
Packaging	Memo	0.00							
Packaging									
260	QC4- 100% Inspect kits for completeness	0.00							
QC	Memo	0.00							
Quality Control									

10/10 10 09 02 ①

10/9/12 sf

S 10/02/07

GU

Work Order ID 61187

August 11, 2010 7:43:16 AM

Page 10

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

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--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

270

0.00



Packaging

Packaging

Memo

0.00

Packaging

Package as per PPP D350-636-012

REV H

280

0.00



QC

QC21- Final Inspection - Work Order Release

Memo

0.00

Quality Control

10/09/13

C 21019113

B61187

Picklist Print

August 11, 2010 7:43:15 AM

Page 1

Work Order ID: 61187

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/11/10


Required Date: 8/20/10


Start Qty: 1.00


Required Qty: 1.00

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07.13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC
 IPP Rev: M 08-04-22 update steps 4,13 DD verified by: EC
 IPP Rev: N 08-09-23 revF as per dwg DD verified by: ec IPP Rev: O
 10.06.22 revise seq110 DD verf: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

ALS4-1032-225		Purchased	No			220	Each	5,945.000	38	38			
<div style="display: flex; justify-content: space-between;"> <div>  <p>Insert</p> </div> <div> <p><u>Location</u></p> <p>PK011</p> <p>110768</p> </div> <div> <p><u>Loc Qty</u></p> <p>5945</p> <p>5945</p> </div> <div> <p><u>Loc Code</u></p> <p></p> </div> </div>													

AN3C5A		Purchased	No			230	Each	1,464.000	34	34			
<div style="display: flex; justify-content: space-between;"> <div>  <p>Bolt</p> </div> <div> <p><u>Location</u></p> <p>ST350</p> <p>114330</p> <p>115015</p> <p>115108</p> <p>115316</p> <p>115371</p> <p>ST351</p> <p>113121</p> </div> <div> <p><u>Loc Qty</u></p> <p>1454</p> <p>11</p> <p>743</p> <p>300</p> <p>300</p> <p>100</p> <p>10</p> <p>10</p> </div> <div> <p><u>Loc Code</u></p> <p></p> </div> </div>													

AN3C6A		Purchased	No			230	Each	425.0000	4	4			
<div style="display: flex; justify-content: space-between;"> <div>  <p>BOLT</p> </div> <div> <p><u>Location</u></p> <p>ST351</p> <p>111982</p> </div> <div> <p><u>Loc Qty</u></p> <p>425</p> <p>425</p> </div> <div> <p><u>Loc Code</u></p> <p></p> </div> </div>													

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Page 2

August 11, 2010 7:43:15 AM

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Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 8/11/10



Required Date: 8/20/10

Start Qty: 1.00



Required Qty: 1.00

AN6C44A Purchased No 230 Each 177.0000 4 4

 BOLT  yl 10/09/01

Location	Loc Qty	Loc Code
FG	2	
103964	2	
ST344	175	
111649	2	
114653	1	
114784	47	
114941	75	
115030	50	

AN8C21A Purchased No 250 Each 57.0000 2 2

 BOLT  10/9/13 SP

Location	Loc Qty	Loc Code
ST345	57	
113558	17	
114653	40	

AN8C35A Purchased No 230 Each 53.0000 1 1

 BOLT  yl 10/09/01

Location	Loc Qty	Loc Code
FP	1	
110847	1	
ST346	52	
114442	27	
115188	25	

August 11, 2010 7:43:15 AM

Shop Packet Print

Page 2

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Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332R Purchased No

230 Each 29.0000 38 38



washer

M115000



x38 JH 10/09/10

Location Loc Qty Loc Code

ST245 29
107534 29

AN960C816L Purchased No

230 Each 21.0000 1 1



WASHER x NAS1149C08332R X?



x1 JH 10/09/10

Location Loc Qty Loc Code

ST348 21
110584 18
111424 3

AN960C816L Purchased No

250 Each 21.0000 1 2



WASHER x NAS1149C08332R



10/9/10 JH

Location Loc Qty Loc Code

ST348 21
110584 18
111424 3

D2741 Manufactured No

250 Each 21.0000 1 1



Blade, 350 Skidtube



10/9/10 JH

Location Loc Qty Loc Code

ST466 21
55905 1
57949 20

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Page 4

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Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D2745

Manufactured No

230

Each

169.0000

8

8



Bushing



Handwritten: 8/10/09/01

Location

Loc Qty

Loc Code

ST023

169

52311

5

59112

164

D3488-042

Manufactured No

230

Each

17.0000

1

1



Blade Fitting Assembly, RH



Handwritten: 8/10/09/01

Location

Loc Qty

Loc Code

FP008

17

53918

5

59643

12

D3492-041

Manufactured No

230

Each

93.0000

8

8



Plug Assembly



Handwritten: 8/10/09/01

Location

Loc Qty

Loc Code

FP013

93

59114

24

59420

69

Handwritten: B61311

Handwritten: 8/10/09/01

August 11, 2010 7:43:15 AM

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Page 4

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Page 5

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Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D3492-043

Manufactured No

230

Each

51.0000

8

8



Plug Assembly

Location

Loc Qty

Loc Code

FP

2

361207

54682

2

FP013

49

59117

1

59190

4

59421

14

60712

30



SH 10/09/10

X8

D3493-1

Manufactured No

250

Each

48.0000

2

2



Washer

Location

Loc Qty

Loc Code

ST065

48

59127

18

60873

30



10/9/10 SP

D3532-1

Manufactured No

250

Each

31.0000

2

2



Spacer

Location

Loc Qty

Loc Code

ST068

31

59426

9

60510

22



10/9/10 SP

D3535-25

Manufactured No

230

Each

24.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP18

24

59623

24



SH 10/09/10

X1

August 11, 2010 7:43:15 AM

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Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 6

August 11, 2010 7:43:15 AM

Work Order ID: 61187

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D3536-25

Manufactured No

230

Each

29.0000

1

1



Gasket



10/09/10

Location

Loc Qty

Loc Code

FP12

29

58820

5

59625

24

x1

D3537-1

Manufactured No

230

Each

55.0000

3

3



Wearpad



10/09/10

Location

Loc Qty

Loc Code

FP

1

55465

1

B61201

x3

FP17

54

57713

3

59593

3

60192

48

D3631-1

Manufactured No

230

Each

571.0000

8

8



Washer



10/09/10

Location

Loc Qty

Loc Code

ST072

297

60755

297

x8

ST076

274

52693

206

54388

68

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Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 7

August 11, 2010 7:43:15 AM

Work Order ID: 61187

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D3672-1 Manufactured No 230 Each 1,011.000 4 4



Phenolic Washer



ysl 10/09/01

Location Loc Qty Loc Code

ST077 993

51674 5

52505 988

ST117 18

34470 18

x4

D3672-13 Purchased No 250 Each 842.0000 2



Phenolic Washer



3
10/9/25/

Location Loc Qty Loc Code

ST077 842

54363 842

8

D3791-1 Manufactured No 230 Each 20.0000 1



Wearplate



1
ysl 10/09/01

Location Loc Qty Loc Code

FP17 20

58573 11

59626 9

x1

D3793-1 Manufactured No 230 Each 15.0000 1



Wearshoe



1
ysl 10/09/01

Location Loc Qty Loc Code

FP18 15

59151 2

59630 13

x1

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 8

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Work Order ID: 61187

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D3793-3 Manufactured No 230 Each 13.0000 1 1



Wearshoe



28 10/09/01

Location Loc Qty Loc Code

FP18 12

59631 12

FP19 1

57947 1

21

D3794-1 Manufactured No 230 Each 19.0000 1 1



Gasket



28 10/09/01

Location Loc Qty Loc Code

FP010 19

57942 18

59627 1

21

D3794-3 Manufactured No 230 Each 24.0000 1 1



Gasket



28 10/09/01

Location Loc Qty Loc Code

FP10 12

60826 12

FP18 12

56066 11

59153 1

21

MS21043-6 Purchased No 230 Each 726.0000 4 4



NUT



28 10/09/01

Location Loc Qty Loc Code

ST301 726

112314 726

24

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 9

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Work Order ID: 61187

Parent Item: D350-636-012


Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00


MS21083C8 Purchased No 230 Each 56.0000 1 1

 NUT YH 10/09/01

Location Loc Qty Loc Code

ST303 56

113845 7

114934 49


MS21083C8 Purchased No 250 Each 56.0000 1 2

 NUT 10/09/01

Location Loc Qty Loc Code

ST303 56

113845 7

114934 49


NAS1611-010 Purchased No 230 Each 267.0000 8 8

 O-RING YH 10/09/01 PTD = ?

Location Loc Qty Loc Code

FP 267

110715 100

110915 167

NAS1611-013 Purchased No 230 Each 67.0000 8 8

 O-RING YH 10/09/01

Location Loc Qty Loc Code

FP 67

114451 51

114496 16

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Page 9

W/O: 61187		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/09/01	230	Replace NAS 1611-010 "O" Rings For D2594-3 B 59358	JH	10/09/01	X8		S 10/09/01

Part No: D350-636-012 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 10

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Work Order ID: 61187

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT

Manufactured No

110

Each

16.0000

1

1



Extrusion Bent

Location

Loc Qty

Loc Code

LG

16

59410

16

110

Each

35.0000

1

1

D2744

Manufactured No



Cap

Location

Loc Qty

Loc Code

LG

35

59198

35

160

Each

0.0000

1

1

D2739

Manufactured No



350 I Beam

D2743

Manufactured No



Crossbolt Spacer

Location

Loc Qty

Loc Code

LG

299

50281

10

57953

2

59111

287

160

Each

54.0000

4

4

D3490-3

Manufactured No



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

54

59229

14

60294

40

1 AUG 10-5-13*

1 BE 10-8-16

B61256

①

DR

10-8-17

8 BE 10-8-18

4 BE 10-8-18

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 11

August 11, 2010 7:43:15 AM

Work Order ID: 61187



Parent Item: D350-636-012



Parent Item Name: Skidtube RH

Start Date: 8/11/10

Required Date: 8/20/10

Start Qty: 1.00

Required Qty: 1.00

D3490-1

Manufactured No

160

Each

19.0000

4

4



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

19

59424

19

B 61217

x 4

SE 10/08/10

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

5

4

3

2

1

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1			D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- 1) MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- 8) WELD PER DART QSI 004
- 9) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- 10) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

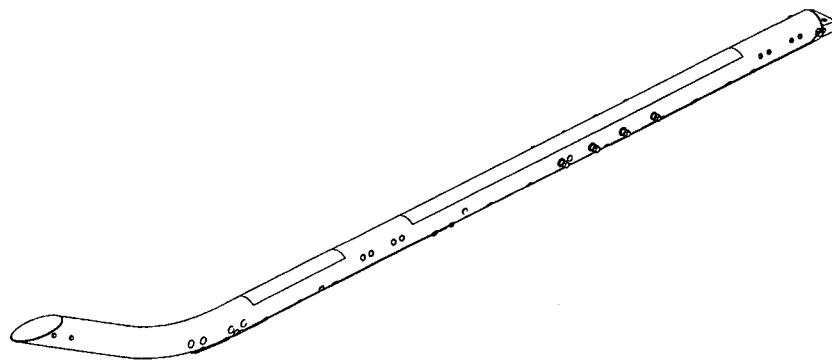
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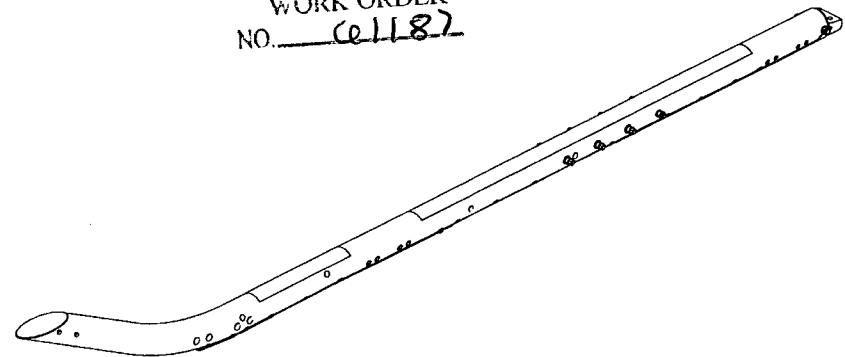
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F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A5-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741, QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	PC	DART AEROSPACE USA, INC.	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED	AS	DRAWING NO.	REV. F
MFG. APPR.	AS	D2750	SHEET 1 OF 11
APPROVED	AS	TITLE	SCALE
DE APPR.	AS	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS RETURNED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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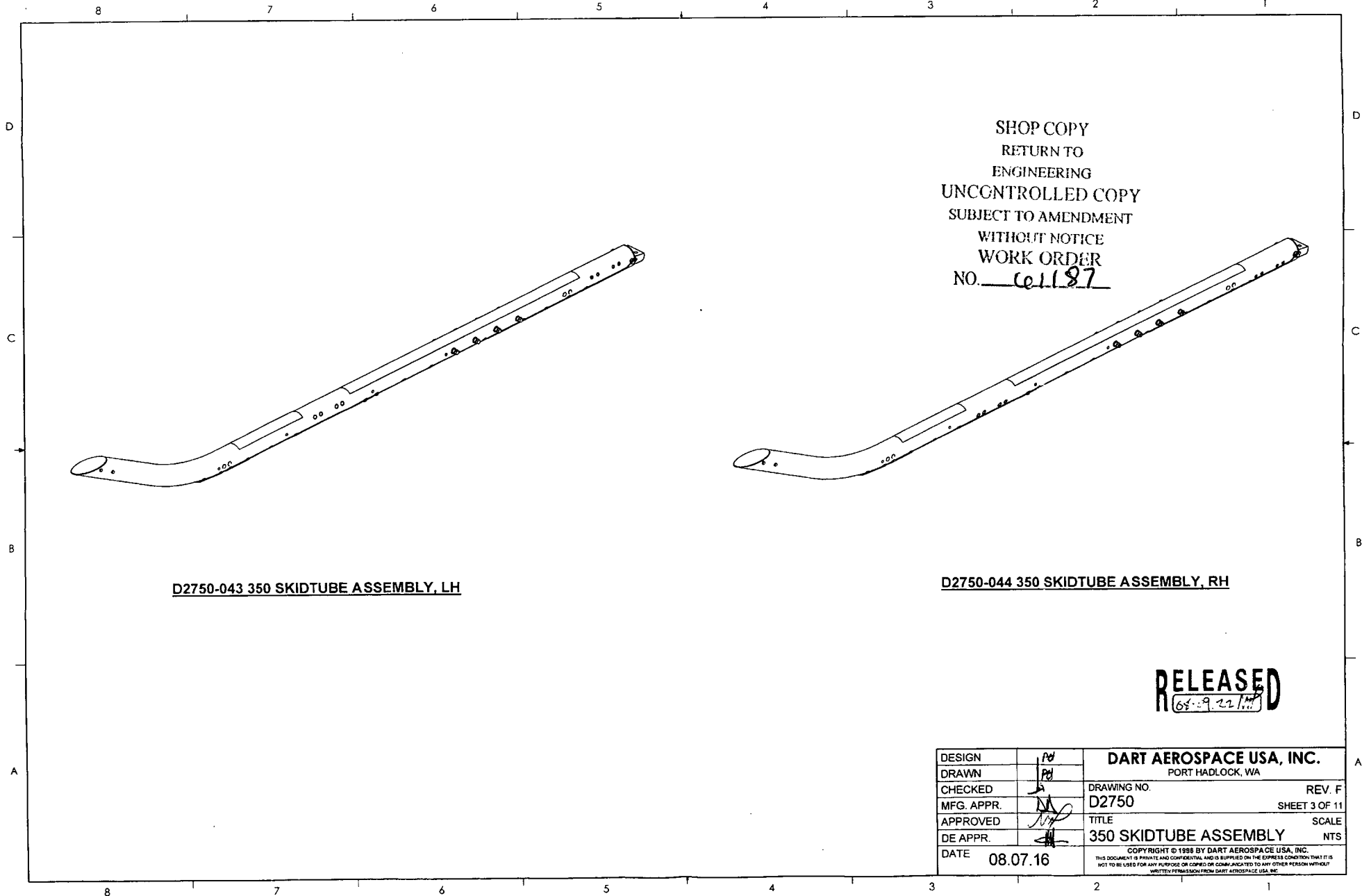
D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

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 08-09-22/11

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APPROVED	MA	TITLE	SCALE
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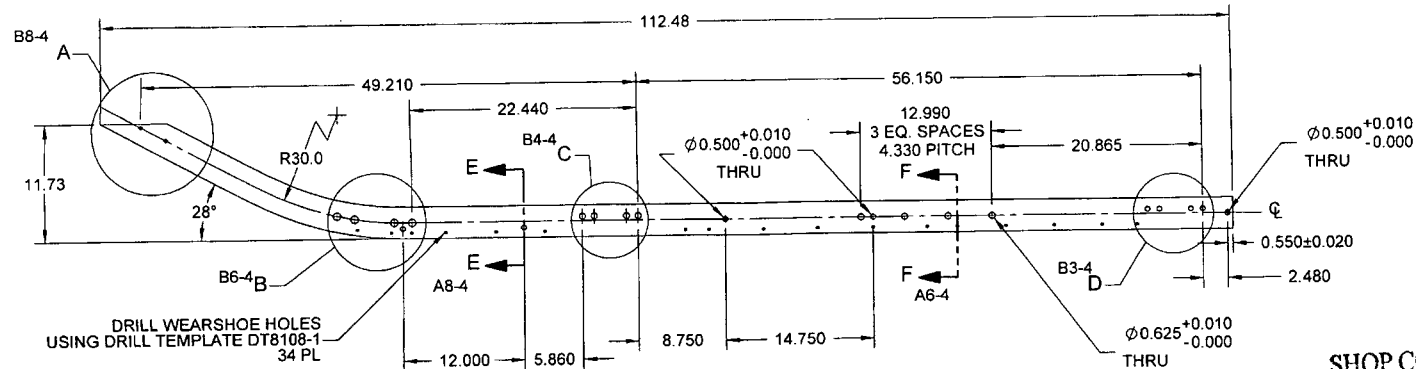


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D2750-043 350 SKIDTUBE ASSEMBLY, LH

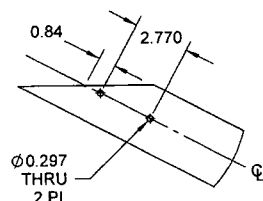
D2750-044 350 SKIDTUBE ASSEMBLY, RH

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68-9-22/11

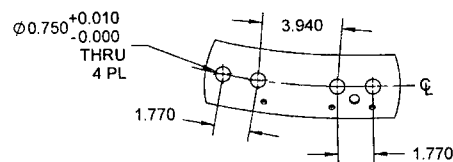


D2750-1 LH SKIDTUBE

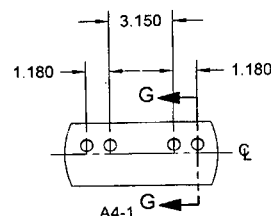
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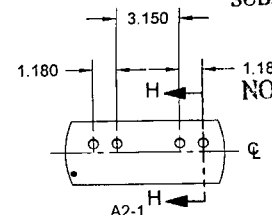
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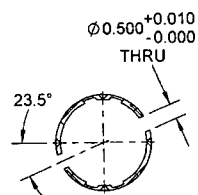
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SCALE 2X



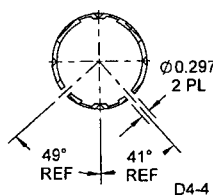
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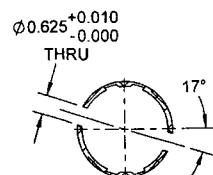
DETAIL D
SCALE 2X



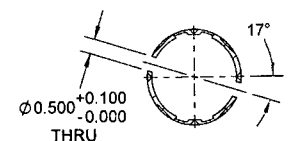
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



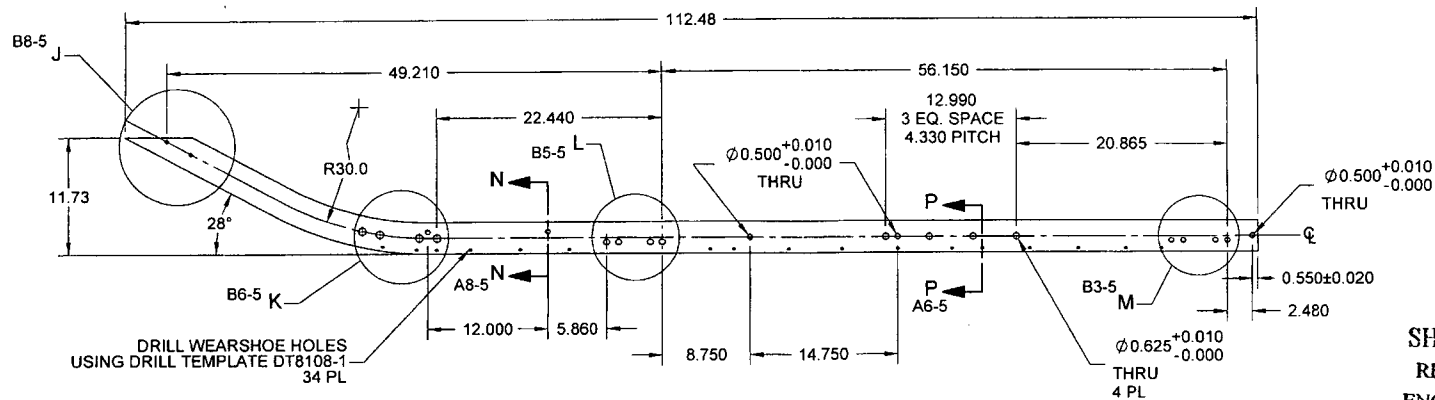
SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

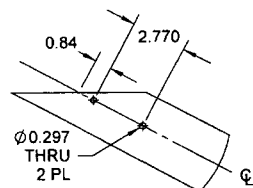
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DRAWN	PA	PORT HADLOCK, WA	
CHECKED		DRAWING NO. D2750	REV. F
MFG. APPR.			SHEET 4 OF 11
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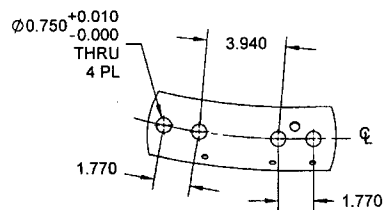


D2750-2 RH SKIDTUBE

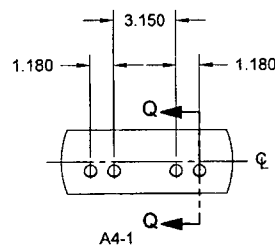
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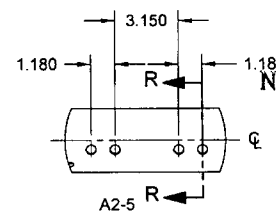
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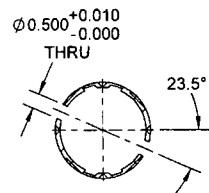
DETAIL K
SCALE 2X



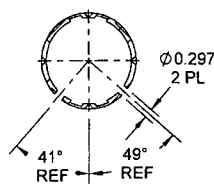
DETAIL L
SCALE 2X



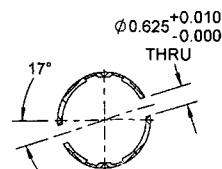
DETAIL M
SCALE 2X



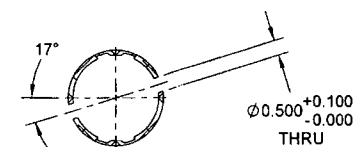
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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8

7

6

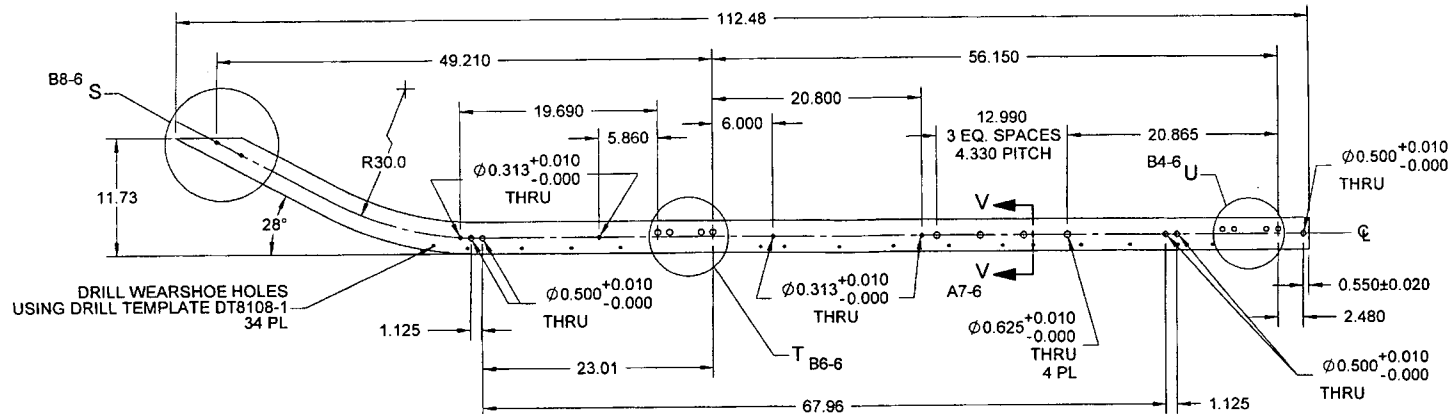
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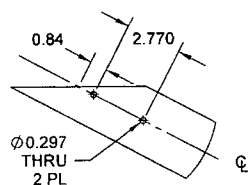
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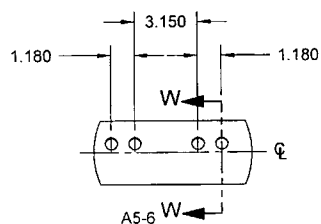


D2750-3 LH SKIDTUBE

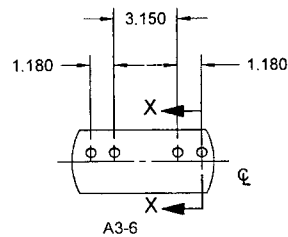
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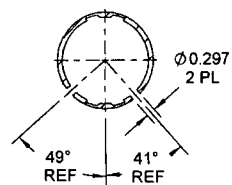
DETAIL S
SCALE 2X



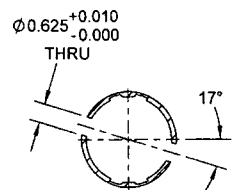
DETAIL T
SCALE 2X



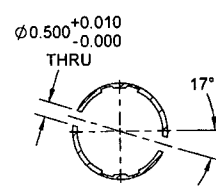
DETAIL U
SCALE 2X



SECTION V-V
SCALE 3X, 17 PL









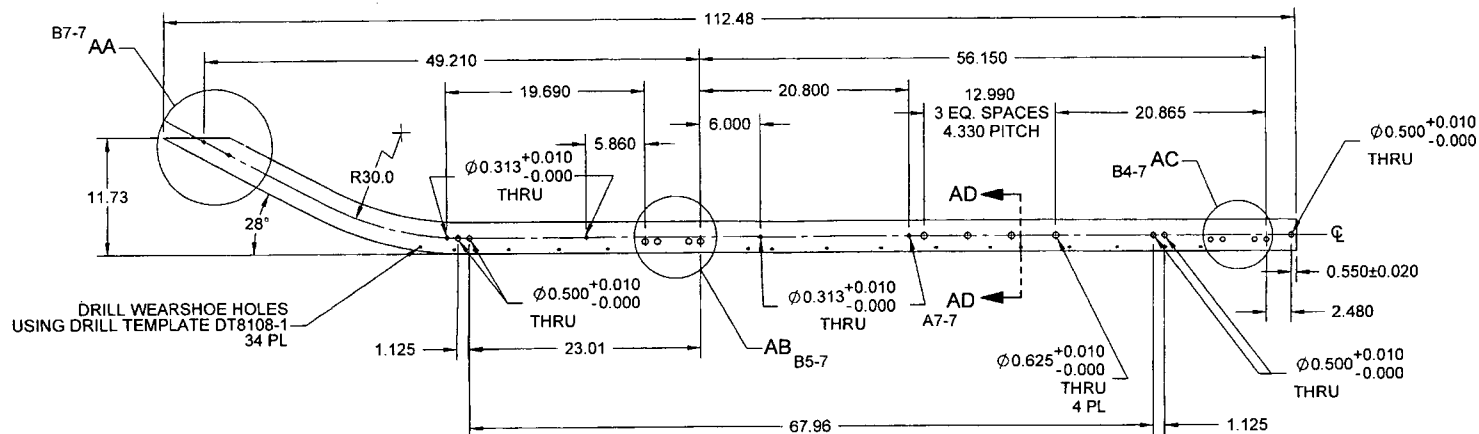
SECTION W-W
SCALE 3X, 4 PL



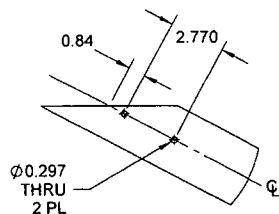
SECTION X-X
SCALE 3X, 4 PL

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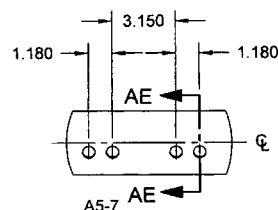
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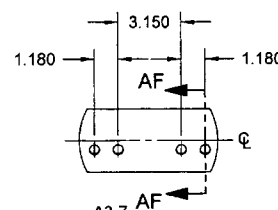
D2750-4 RH SKIDTUBE



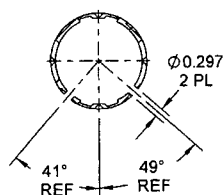
DETAIL AA
SCALE 2X



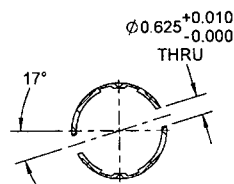
DETAIL AB
SCALE 2X



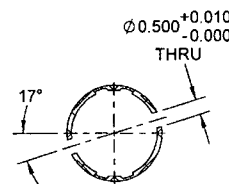
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL

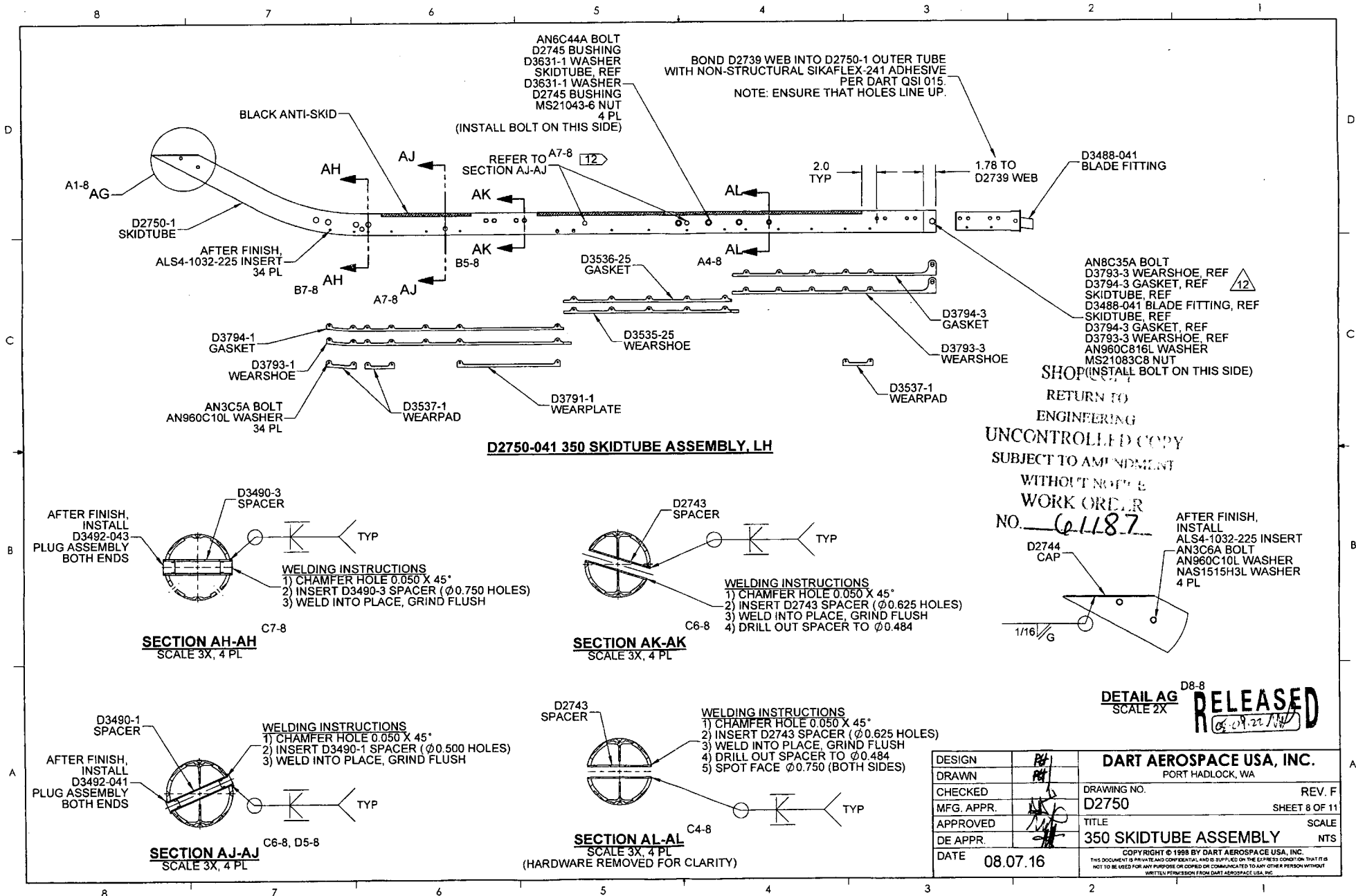


SECTION AF-AF
SCALE 3X, 4 PL

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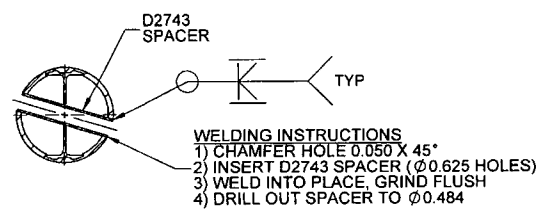
BOND D2739 WEB INTO D2750-3 OUTER TUBE
WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE
PER DART QSI 015.
NOTE: ENSURE THAT HOLES LINE UP

AN6C44A BOLT
D2745 BUSHING
D3631-1 WASHER
SKIDTUBE, REF
D3631-1 WASHER
D2745 BUSHING
MS21043-6 NUT
4 PL
(INSTALL BOLT ON THIS SIDE)

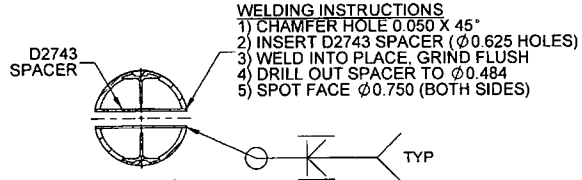
D3488-041
BLADE FITTING

AN8C35A BOLT
D3793-3 WEARSHOE, REF
D3794-3 GASKET, REF
SKIDTUBE, REF
D3488-041 BLADE FITTING, REF
SKIDTUBE, REF
D3794-3 GASKET, REF
D3793-3 WEARSHOE, REF
AN960C816L WASHER
MS21083C8 NUT
(INSTALL BOLT ON THIS SIDE)

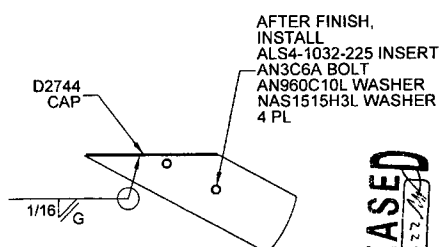
D2750-043 350 SKIDTUBE ASSEMBLY, LH



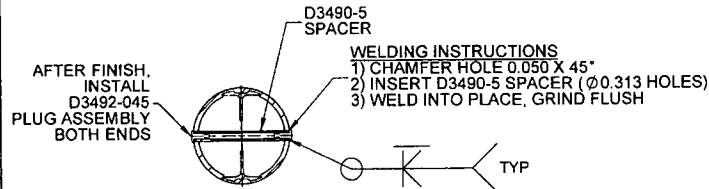
SECTION AT-AT
SCALE 3X, 4 PL



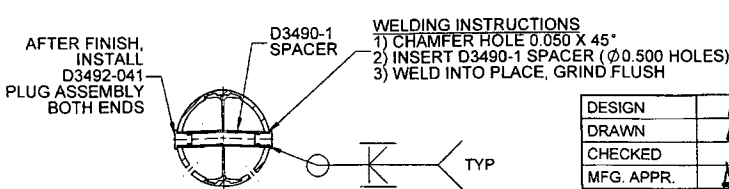
SECTION AV-AV
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



DETAIL AS
SCALE 2X



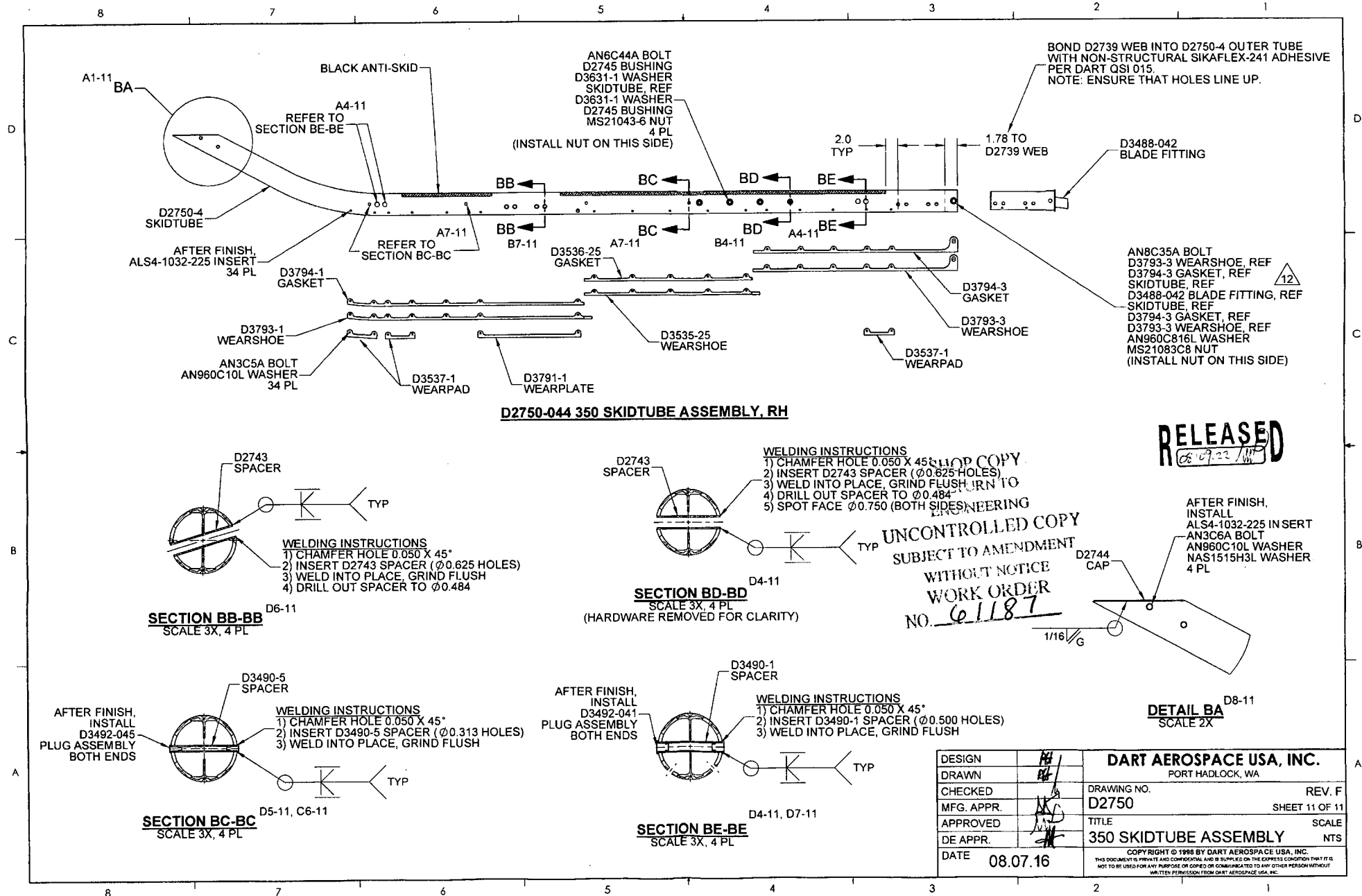
SECTION AU-AU
SCALE 3X, 4 PL



SECTION AW-AW
SCALE 3X, 4 PL

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08 JUL 22 1998



NO. 236

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 60988
Part number: D350-636-012
Description: 350 skid tube
Welding Process: Tig[☒] Mig[☐]
Base material: Aluminium
Current: AC[☒] DC[☐]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[☐]
Penetration: pass[☒] fail[☐]

UNACCEPTABLE

Cracks: pass[☒] fail[☐]
Undercut: pass[☒] fail[☐]
Pin holes: pass[☒] fail[☐]
Overlap (cold lap): pass[☒] fail[☐]
Porosity (surface): pass[☒] fail[☐]
Coloration: pass[☒] fail[☐]

Qualifier [Signature] Date of Test Coupon 10.08.12

Welder [Signature] Date of Test Coupon 10.08.12

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

